#### REMARKS/ARGUMENTS

In response to the Office Action mailed September 23, 2005, Applicants submit the following commentary and information. Yet another Information Disclosure Statement is supplied accompanied by various publications that are clearly already available to the Examiner from the comments included in the Office Action.

By way of review, this patent application includes at page 4 a reference to what was previously known in the prior art.

"An example is set forth in Li, Y. <u>Advanced Computing Technology for Integrated Design of Textiles and Apparel</u>, Ergonomics of the Protective Clothing, Proceedings of NOKOBETEF 6 and 1<sup>st</sup> European Conference on Protective Clothing; Stockholm, Sweden; May 7-10, 2000, which is herein incorporated by reference in its entirety."

The present patent application identifies three co-inventors, including Yi Li, the person referred to in the foregoing passage. According to the Office Action, the Examiner has declared that the document referred to above is not a publication and has refused to consider the document which was submitted in Information Disclosure Statement in accordance with a prior demand for a copy of the cited document. The Examiner has asserted, based upon "a review of the conference Proceedings, obtained by the office, ... that there is no such paper in the Proceedings." In addition, the Examiner asserts that there are three different papers in the cited Proceedings by at least one of the co-inventors of the present patent application that the Examiner believes are highly relevant to the clamed invention, but which have not been supplied to the Office. Of course, while the Examiner cites 35 USC 1.56, Applicants are unaware of any practice that prohibits an Examiner from citing a relevant prior art publication by an inventor, even if not supplied by the inventor, but discovered by the Examiner.

The following comments and the attached Information Disclosure Statement supply information provided by Dr. Li, the lead inventor of the present patent application and the person identified as the sole author of the document referred to in the patent application.

The undersigned, following the implicit suggestion of the Examiner, searched the Internet to find the Proceedings of the conference referred to in the excerpt from page 4 of the patent application. The conference Proceedings were obtained with moderate difficulty and searching. Although the Examiner has access to the Proceedings through the Internet, as a courtesy, and at a cost to the Applicants, the attached Information Disclosure Statement includes the frontispiece of the conference Proceedings, the Table of Contents of the published Proceedings, and three papers from the published Proceedings that include Dr. Li as a co-author. If other articles in the published conference Proceedings seem pertinent to the Examiner, it is apparent that he has access through the Internet to those other papers.

It is apparent by comparing the document previously submitted indicating sole authorship by Dr. Li and with the title "Advanced Computing Technology for Integrated Design of Textiles and Apparel" to the document appearing in the published Proceedings identifying Dr. Li as one of four authors and entitled "Integrated CAD for Functional Textiles and Apparel", that the documents are substantially similar in content. Dr. Li explains the difference in title, authorship, and content between these two documents, based solely on recollection, that there was no intention originally to publish the Proceedings of the conference. It was, after all, the first such European conference, although others have followed.

According to Dr. Li, the paper she provided to her patent attorney in Hong Kong in connection with the preparation of the present patent application, and which is referred to on page 4 of the patent application and which was previously submitted to the Examiner, is the draft of a paper sent to the conference and presented at the conference. At a later time, after conclusion of the conference, the conference organizers decided to publish a conference Proceedings and asked the presenters at the conference to revise and submit the initially submitted papers for publication. It is Dr. Li's recollection that more than one year passed following the conference before the conference Proceedings were published. At the time of the filing of the present patent application, which is not based upon any previously filed foreign patent application and which was prepared under urgent circumstances to perfect the filing within one year of the conference presentation, that

draft was incorporated by reference in the patent application. It is Dr. Li's belief that, at the time of the preparation of the patent application, the conference Proceedings were not yet available.

In view of the Examiner's demand for a copy of the paper referred to at page 4 of the patent application, that very paper was supplied, rather than the form of the paper that appeared in the published Proceedings. Dr. Li advises that it is not unusual in academic circles to revise a conference paper for formal publication or to change authorship at the time of the preparation of the formal published document. It is apparent that the basic information in the two forms of the paper is substantially the same. While the foregoing information represents Dr. Li's best recollection as to what occurred, unfortunately, events now inquired into occurred some four or five years ago and correspondence regarding the conference, the paper presented, and the ultimate published form of the paper, are no longer available.

With regard to the other papers appearing in the conference Proceedings and identifying Dr. Li as a co-author, she does not agree with the Examiner that those papers are highly relevant to the invention claimed in the present patent application. The paper co-authored with Junyan Hu reports specific experimental results not related to the digitized functional design of fabrics. The paper regarding heat preservation in a diving suit reports the result of specific modeling of that garment and is not believed by Dr. Li to relate directly to digitized functional design systems for textiles. However, both documents are now before the Examiner for his decision as to relevance and any effect upon the patentability of the pending claims.

As a further courtesy to the Examiner, attached is a four-page list of 58 publications identifying Dr. Li as the author or as a co-author. Any or all of these documents would be made available to the Examiner upon request and an effort is being made to obtain and supply copies of the four publications that have nominal publication dates before the filing date of the present patent application. Three of those four papers have titles suggesting that the content is similar to the paper published in the Proceedings of the Stockholm conference. The list, which does not include the papers from the Stockholm conference, was complied and supplied by Dr. Li.

As it is believed that the foregoing remarks and the attached Information Disclosure Statement fully respond to the questions raised in the Office Action mailed September 23, 2005, Applicants respectfully request the Examiner resume examination of this patent application on its merits.

Respectfully submitted,

effrey A. Wyand, Reg. No. 29,458

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Amendment or ROA - Regular (Revised 2005 09 01)

# Ergonomics of Protective Clothing

Proceedings of Nokobetef 6 and 1st European Conference on Protective Clothing held in Stockholm, Sweden, May 7–10, 2000

Kalev Kuklane and Ingvar Holmér (eds.)

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### PUBLICATIONS of Dr. Yi Li (Up to Jan-2005)

### Research Monograph/books

٠. :

- 1. Li Y., The Science of Clothing Comfort, Textile Progress, Vol.31, No.1/2, The Textile Institute, May 2001, Alden, Oxford, UK, pp1-138, ISSN00405167, ISBN 1870372247
- 2. Zhang X, Yeung K.W., Li Y. and Yao Mu, 服装起拱与力学工程设计(Engineering Design and Fabric Bagging), China Textile Press, Beijing, October 2002, pp1-180, ISBN 7-5064-2383-9/TS.1610 (in Chinese)
- 3. Li Y., Wong A.W., and Hu J.Y., Clothing Biosensory Engineering, Woodhead Publishing Limited, Abington Hall, Abington, Cambridge, CB1 6AH, UK (in press)
- 4. Li Y. and Zhang X., Clothing Biomechanical Engineering, Woodhead Publishing Limited, Abington Hall, Abington, Cambridge, CB1 6AH, UK (in press)
- 5. Li Y. and Newton E., Advanced Computing Technology for Integrated Design of Textiles and Apparel, IFFTI 3<sup>rd</sup> Annual Conference: Fashion Directions: Visioning the Future, London, 9-10 November, 2000
- 6. Li Yi and Zhang Xin, Digitized Functional Design of Textiles and Apparel Products, Forum on the Development of China's Textile Industry, Beijing, March 29~30, 2001, pp64-69
- 7. Li Yi and Zhang Xin and Wong Zhong, Digitized Technology for Functional Design of Textiles and Apparel Products, Fashion Forum "Digitized Clothing Industry" in 2001 Shanghai International Fashion Culture Festival, Shanghai, April 25-26, 2001, pp6-9
- 8. Li Yi, Advanced Engineering Design of Functional Textiles and Apparel Products, International Conference on "Tomorrow's Textiles", Manchester, UK, May 24-25, 2001
- 9. Li Yi, Computational Modeling in Engineering Design of Textiles and Apparel Products, Canada-China Workshop on Industrial Mathematics, Hong Kong Baptist University, page 7, May 23-26, 2005
- 10. Li Fengzhi and Li Yi, Effect of clothing material on thermal responses of the human body, Modelling Simul. Mater. Sci. Eng. 13 (2005) 809-827
- 11. Li Yi and Li Fengzhi, Numerical Simulation of Virus Diffusion in Facemasks During Breathing Cycles, Int. J. of Heat and Mass Transfer, Vol. 48 (2005), 4229-4242, 2003: 8/106, in Engineering, Mechanical, Impact Factor: 1.293, top 10%
- 12. Yeung, K.W., Li, Y., Zhang, X., 3D Biomechanical Human Model for Numerical Simulation of Body-Garment Dynamic Mechanical Interactions during Wear. J. Text. Inst., 2004, 95, Nos 1-6, 59-79
- 13. Li Y. and Wang Z., Dynamic couple heat and moisture transfer in multiplayer and non-uniform porous textiles, J. Applied Polymer Science, 94 (4): 1590-1605, Nov 15 2004, 2003:25/72 in Polymer Science, Impact factor: 1.017, top 34%
- 14. Li Y. and Zhang X., Mechanical Sensory Engineering Design of Textile and Apparel Products, Vol.93, No.2, Part 2, p56-75, 2002 (published in March 2005)
- 15. Liu Yingxi, Li Fengzhi, Luo Zhongxuan, Li Yi A new algorithm for solution of transient thermal and humidity field in porous fabric Chinese Journal of Numerical Mathematics and Applications (in English, by Allerton press, inc) 2004, 26(2):28-37
- 16. Li Y., Li F.Z., Liu Y.X., Luo Z.X., An integrated model for simulating interactive thermal processes in human-clothing system, J. Thermal Biology, 29(2004), 567-575, Impact factor: 0.687, Biology/Zoology
- 17. Ying B.A., Kwok Y.L., Li Y., Yeung C.Y., Li F.Z., Li S., Mathematical modeling of the thermal physiological responses of clothed infants, J. Thermal Biology, 29(2004), 559-565, Impact factor: 0.687, Biology/Zoology

- 18. Dai X., Li Y., Liu R., and Kwok Y.L., Numerical simulation of mechanical interaction between lower-limb and compression stocking, J. Information and Computational Science, 1, 1 (2004), 12-20
- 19. Li Y, Wang Z., Wang R.M., Mao A.H., Hou W.B., The numerical analysis method in engineering design of thermal functional textile products, J. Information and Computational Science, 1, 1 (2004), 63-68
- 20. Wang Z., Li Y., Wong A.S.W., Simulation of clothing thermal comfort with fuzzy logic, Environmental Ergonomics, Ed by Tochihara Y. and Ohnaka T., Elsevier Ltd, 2005, 473-476, ISBN 0080444660
- 21. Li Y. and Wang Z., Thermal sensory engineering design of textile and apparel products, Environmental Ergonomics, Ed by Tochihara Y. and Ohnaka T., Elsevier Ltd, 2005, 467-471, ISBN 0080444660
- 22. Li Y. and Zhu Q.Y., A Model of Heat and Moisture Transfer in Porous Textiles with the Phase Change Materials, Text. R.J., 74(0), pp. 447-457 (2004) (PolyU5281/03E, ITS-023-03 and A188), 2003: 7/14 in Material Science, Textiles, Impact Factor: 0.473, top 50%
- 23. Li Fengzhi, Li Yi, Liu Yingxi, Luo Zhongxuan Numerical Simulation of Coupled Heat and Mass Transfer in Hygroscopic Porous Materials Considering the Influence of Atmospheric Pressure. Numerical heat transfer Part B: Fundamentals Volume 45,1-14,2004, Impact Factor: 1.052, in Thermodynamics: 8/39, top 21%
- 24. Wang R.M., Li Y., You F., Luo X.N., Rational Recurrence Curves and Recurrence Surfaces in Multivariate B-Form on Some Regions, J. Comput. Appl. Math. Vol. 163, No.1, (Feb. 2003), pp. 277–285, Impact Factor 0.567, 88/153 in MATHEMATICS, APPLIED
- 25. Wong A.S.W. and Li Y., Prediction of clothing comfort perceptions using artificial intelligence hybrid models, Textile Res. J., 74(1), 13-19 (2004), 2003: 7/14 in Material Science, Textiles, Impact Factor: 0.473, top 50%
- 26. Dai X.Q., Li Y. and Zhang X., Simulation of Anisotropic Woven Fabric Deformation with a New Particle Model, Textile Res. J., 73(12), 1091-1099 (2003), 2003: 7/14 in Material Science, Textiles, Impact Factor: 0.473, top 50%
- 27. Wong A.S.W. and Li Y., Performances of artificial intelligence hybrid models in prediction of clothing comfort from fabric physical properties, Sen-i Gakkaishi, Vol.59, No.11 (2003), pp429-436
- 28. Luo Zhongxuan, Li Fengzhi, Liu Yingxi, Li Yi Effect of The Environmental Atmosphere on Heat, Water and Gas Transfer within Hygroscopic Fabrics. Journal of Computational and Applied Mathematics, Volume 163, Issue 1, 1 February 2004, Pages 199-210, Impact Factor 0.567, 88/153 in MATHEMATICS, APPLIED
- 29. Qingyong Zhu, Yi Li, Effects of pore size distribution and the fiber diameter on the coupled heat and liquid moisture transfer in porous textiles, International Journal of Heat and Mass Transfer, 46 (2003) 5099-5111 (A188/NSFC10102024), 2003: 8/106, in Engineering, Mechanical, Impact Factor: 1.293, top 7.5%
- 30. Wang Z., Li Y., Zhu. Q.Y., and Luo Z.X., Radiation and Conduction Heat Transfer Coupled with Liquid Water Transfer, Moisture Sorption and Condensation in Porous Polymer Materials, Journal of Applied Polymer Science, Vol.89, 2780-2790 (2003), 2003:25/72 in Polymer Science, Impact factor: 1.017, top 35%
- 31. Yi Li and Qingyong Zhu, Simultaneous Heat and Moisture Transfer with Moisture Sorption, Condensation and Capillary Effects in Porous Textiles, *Text. Res. Journal*, 73

- (6), 515-524, 2003, 2003: 7/14 in Material Science, Textiles, Impact Factor: 0.473, top 50%
- 32. Wong A.S.W., Li Y. and Yeung, K.W., Artificial neutral network predictions of human psychological perceptions of clothing sensory comfort, *Text. Res. J.*, 73(1), 31-37, 2003, top 50%
- 33. Li, Y., Zhang, X., Yeung, K. W., A 3D Bio-Mechanical Model for Numerical Simulation of Dynamic Mechanical Interactions of Bra and Breast during Wear, Sen'i Gakkaishi, 59, 1, 12-21 (2003)
- 34. Wang Z. and Li Y., Influence of Waterproof Fabrics on the Coupled Heat and Moisture Transfer in Clothing System, Sen-i Gakkaishi, Vol.59, No.5, 187-197 (2003)
- 35. Yi Li and Qingyong Zhu, A Model of Coupled Liquid Moisture and Heat Transfer in Porous Textiles with Consideration of Gravity, Numerical Heat Transfer, Part A: Applications, Vol. 43 (5), pp1-23, 2003, Impact factor: 0.914, in Thermodynamics: 12/39, top 30%
- 36. Luo X.N., Nie Hui., Li Y., and Luo Z.X., Recurrent surfaces on arbitrary quadrilateral mesh, Journal of Computational and Applied Mathematics, 144 (2002), pp221-232, Impact Factor 0.567, 88/153 in MATHEMATICS, APPLIED
- 37. Zhang X., Li Y., Yeung K.W. and Yao M., Fabric Bagging: The Rheological Mechanism and Predictions, Journal of The Textile Institute, Vol.92, Part 1, No.3, pp290-310 (2002) (Published Nov-2003)
- 38. Yi Li, Qingyong Zhu, Influence of Thickness and Porosity on the Coupled Heat and Liquid Moisture Transfer in Porous Textiles, Text. Res. J, 72(5), p435-446 (2002), 2003: 7/14 in Material Science, Textiles, Impact Factor: 0.473, top 50%
- 39. X. Zhang, K.W. Yeung, Y. Li, Numerical Simulation of 3D Dynamic Garment Pressure, Textile Research Journal, 72(3), pp245-252 (2002), 2003: 7/14 in Material Science, Textiles, Impact Factor: 0.473, top 50%
- 40. Wang Z., Y. Li, C.Y. Yeung and Y.L. Kwok, Mathematical Simulation of the Perception of Fabric Thermal and Moisture Sensations, Textile Research Journal, 72(4), pp327-334 (2002), 2003: 7/14 in Material Science, Textiles, Impact Factor: 0.473, top 50%
- 41. Zhang, X, Li, Y., Yeung, K.W., Yao, M., Viscoelastic Behaviour of Fibres During Woven Fabric Bagging, TEXT RES J. 70 (9): 751-757 SEP 2000, 2003: 7/14 in Material Science, Textiles, Impact Factor: 0.473, top 50%
- 42. Zhang X., Li Y., Yeung K.W., Miao M.H. and Yao M., Fabric bagging: distribution of stresses in isotropic and anisotropic fabrics, Journal of The Textile Institute, Vol. 91, 2000, Part 1, No.4, 563-576
- 43. Zhang X., Li Y., Yeung K.W., Yao M. and Kong L.X., (2000), A Finite Element Study of Stress Distribution in Textiles with Bagging, Computational Mechanics: Techniques and Developments, Civil-Comp Press, Edinburgh, pp235-242
- 44. Zhang, X, Li, Y., Yeung, K.W., Yao, M., (1999) Relative Contributions of Elasticity and Viscoelasticity of Fibers and Inter-fiber Friction In Bagging of Wool Woven Fabrics, J. Text. Inst., Vol. 91, Part I, No.4, 2000, 577-589.
- 45. Luo Z., J.Fan and Y. Li, Heat and Moisture Transfer with Sorption and Condensation in Porous Clothing Assemblies and Numerical Simulation, International Journal of Heat and Mass Transfer, Vol. 43, No.16, May, 2000, pp2989-3000, 2003: 8/106, in Engineering, Mechanical, Impact Factor: 1.293, top 7.5%
- 46. Li Y. and Luo Z.X., Physical Mechanisms of Moisture Diffusion into Hygroscopic Fabrics during Humidity Transients, Journal of The Textile Institute, Vol.91, No.2, 2000, pp1-15

- 47. Zhang X., Li Y., Yeung K.W. and Yao M., Mathematical Modeling Fabric Bagging Behavior, Textile Res. Journal, Vol.70, No.1, 2000, pp18-28, 2003: 7/14 in Material Science, Textiles, Impact Factor: 0.473, top 50%
- 48. Li Y and Lou Z.X, An Improved Mathematical Simulation of the Coupled Diffusion of Moisture and Heat in Wool Fabric, Textile Research Journal, 69(10), 1999, 760-768, 2003: 7/14 in Material Science, Textiles, Impact Factor: 0.473, top 50%
- 49. LI Yi, ZHANG Xin and DAI Xiao-qun, Chapter 1 Clothing Biomechanical Engineering Design, in Clothing Biomechanical Engineering, edited by LI Y. and DAI X.Q., Woodhead Publishing Limited, Abington Hall, Abington, Cambridge, CB1 6AH, UK (in press)
- 50. DAI X. Q., LI Y. and ZHANG X, Chapter 8 Contact Mechanics in Wearing Garment, in Clothing Biomechanical Engineering, edited by LI Y. and DAI X.Q., Woodhead Publishing Limited, Abington Hall, Abington, Cambridge, CB1 6AH, UK (in press)
- 51. LI Y, DAI Xiao-qun and ZHANG Xin, Chapter 14 Integration of Mechanical Models into Numerical Simulations, in Clothing Biomechanical Engineering, edited by LI Y. and DAI X.Q., Woodhead Publishing Limited, Abington Hall, Abington, Cambridge, CB1 6AH, UK (in press)
- 52. WANG Ruo-mei, Luo Xiaonan, LI Yi and Zhang Xin, Chapter 15 Database for biomechanical engineering design in "Clothing Biomechanical engineering design", Edited by Yi Li, and Xiaoqun Dai, Woodhead Publishing Ltd, (in Press).
- 53. WANG, Ruo-mei, Luo Xiaonan, DAI Xiao-qun, ZHANG Xin and LI Yi, Chapter 16 Preparation for the mechanical simulation, in Clothing Biomechanical Engineering, edited by LI Y. and DAI X.Q., Woodhead Publishing Limited, Abington Hall, Abington, Cambridge, CB1 6AH, UK (in press)
- 54. LI Yi, WANG Ruo-mei, DAI Xiao-qun, ZHANG Xin and Luo Xiaonan, Chapter 17 Visualization for the Mechanical Analysis, in Clothing Biomechanical Engineering, edited by LI Y. and DAI X.Q., Woodhead Publishing Limited, Abington Hall, Abington, Cambridge, CB1 6AH, UK (in press)
- 55. ZHANG Xin, LI Yi, and WONG Anthony, Chapter 18 Chapter 18 Biomechanical Engineering of Jeans, in Clothing Biomechanical Engineering, edited by LI Y. and DAI X.Q., Woodhead Publishing Limited, Abington Hall, Abington, Cambridge, CB1 6AH, UK (in press)
- 56. LI Y., Zhang X. and YEUNG K.W., Chapter19: Biomechanical Engineering of Sports Bra, in Clothing Biomechanical Engineering, edited by LI Y. and DAI X.Q., Woodhead Publishing Limited, Abington Hall, Abington, Cambridge, CB1 6AH, UK (in press)
- 57. LI Yi, DAI Xiao-qun, ZHANG Ming and CHEUNG Jason Tak-man, and ZHANG Xin, Chapter 21 Biomechanical Engineering Design of Socks, in Clothing Biomechanical Engineering, edited by LI Y. and DAI X.Q., Woodhead Publishing Limited, Abington Hall, Abington, Cambridge, CB1 6AH, UK (in press)
- 58. WONG Anthony, LI Yi, Edward Newton and ZHANG Xin, Chapter 23 Biomechanical Engineering of Aerobic Sportswear, in Clothing Biomechanical Engineering, edited by LI Y. and DAI X.Q., Woodhead Publishing Limited, Abington Hall, Abington, Cambridge, CB1 6AH, UK (in press)